AMENDMENT

In The Claims

1. (currently amended) A high pressure applicator for driving the delivery of a flowable tissue implant material, comprising:

a first column having an inner wall, an outer wall, a first end and a second end having an orifice for delivering implant material therethrough, and an intermediate section between said first and second ends, said first column having a volume greater or equal to the volume of implant material to be delivered, on average, to a vertebral body during a vertebroplasty procedure; said first column further comprising an introduction section commencing at said first end and adapted to hold said implant material, said introduction section having a different size than said intermediate section;

a second column, said second column being drivable with respect to said first column to generate a pressure within said first column; and

a handle attached to one of said first column and second column and radially extending therefrom to provide a user a mechanical advantage upon grasping said handle wherein said applicator is capable of generating pressures of at least about 1000 psi wherein said introduction section is sized to facilitate purging of air trapped in said implant material when said second column is driven with respect to said first column.

2. (previously amended) The high pressure applicator of claim 1, further comprising at least one sealing element interfacing with said inner wall of said first column, said at least one sealing element providing for or enhancing generation of said pressure.

3. (Original) The high pressure applicator of claim 1, wherein said second column comprises a wall which is drivably engageable with one of said inner and outer walls.

4. (Currently Amended) The high pressure applicator of claim 1, wherein said ~~further comprising a~~ handle is integrally formed with or affixed to and extending radially from said second column to provide the user a mechanical advantage upon grasping said handle.

5-14. (cancelled)

15. (previously amended) The high pressure applicator of claim 3, further comprising threading on at least a portion of said inner wall of said first column, and wherein said wall of said second column is an external wall comprising threading along at least a portion thereof, said threading of said external wall being engageable with said threading on at least a portion of said inner wall.

16. (Original) The high pressure applicator of claim 15, wherein said threading on said external wall engages with said threading on said inner wall to form a pressure seal therebetween.

17. (previously amended) The high pressure applicator of claim 15, further comprising at least one sealing element mounted to an end portion of said second column and adapted to form or enhance a pressure seal with said inner wall.

18. (Original) The high pressure applicator of claim 17, wherein said at least one sealing element comprises an O-ring.

19. (Original) The high pressure applicator of claim 17, wherein said at least on sealing element comprises a Teflon wrap.

20. (previously amended) The high pressure applicator of claim 1, wherein said handle is integrally formed with or affixed to said first column.

21. (previously amended) The high pressure applicator of claim 15, wherein said threading cover only a portion of said second column external wall, an end portion of said second column being relatively smooth.

22. (Original) The high pressure applicator of claim 21, wherein only a portion of said inner wall comprises threads, the remainder of said inner wall being substantially smooth.

23. (Original) The high pressure applicator of claim 22, wherein said relatively smooth end portion comprises a reduced diameter section having an outside diameter less than an inside diameter of said threads on said inner wall, and an enlarged section which closely fits with said substantially smooth inner wall to form a pressure seal therewith.

24. (Original) The high pressure applicator of claim 1, wherein said first column comprises a hinged or removable section adapted to swing open or be removed from said first column for drivably engaging said first and second columns.

25. (Original) The high pressure applicator of claim 22, wherein said end portion of said external wall closely fits with said remainder of said inner wall to form a pressure seal therewith.

26. (Original) The high pressure applicator of claim 25, further comprising at least one sealing element mounted to said end portion of said second column and adapted to enhance said pressure seal.

27. (Original) The high pressure applicator of claim 25, wherein said at least one sealing element comprises an O-ring.

28.- 39. (Cancelled)

40. (previously amended) The high pressure applicator of claim 1, wherein said applicator is capable of generating pressures of at least 2000 psi.

41. (previously amended) The high pressure applicator of claim 1, wherein said applicator is capable of generating pressures of at least 2500 psi.

42. (previously amended) The high pressure applicator of claim 1, wherein said applicator is capable of generating pressures of at least 3000 psi.

43-51. (cancelled).

52. (New) The high pressure applicator of claim 1, further comprising said implant material and wherein said implant material is an artificial implant material adapted to be biocompatible and set within a bone body.

53. (New) The high pressure applicator of claim 1, wherein said introduction section has a larger diameter than said intermediate section.

54. (New) A high pressure applicator for driving the delivery of a flowable tissue implant material, comprising:

a first column having an inner wall, an outer wall, a first end and a second end having an orifice for delivering implant material therethrough, and an intermediate section between said first and second ends, said first column further comprising an enlarged introduction section commencing at said first end, said introduction having a larger diameter than the intermediate section; and

a second column, said second column being drivable with respect to said first column to generate a pressure within said first column; and wherein said first column further supports a hinged or removable section adapted to swing open or be removed from said first column for drivably engaging said first and second columns.